



# OIL PUMP QUALITY STATEMENT



**180+ REFERENCES COVERING  
9,000+ VEHICLE MODELS**



[www.bgautomotive.co.uk](http://www.bgautomotive.co.uk)



# BGA'S OIL PUMP QUALITY TESTING

Tested to match or surpass OEM quality.



## QUALITY PROMISE

BGA uses **OE (original equipment)** parameters and tolerances as the mandatory MINIMUM requirements to pass our quality controls – meaning that our components can and will often surpass OE.

### Quality Certificates



ISO9001:2015



IATF 16949:2016



Block Exemption

### 3 Year Guarantee

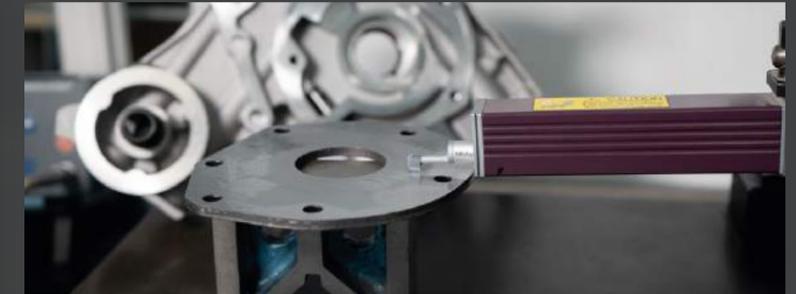
BGA offer a 3-year warranty on all products to back up the quality statement.

Mechanics will always endure full satisfaction and peace of mind while fitting BGA high quality parts and components.

### Heritage

BGA emerged as the aftermarket division of the 4BG Group, a leading OE Gasket and Engine component manufacturer formed in 1929 producing more than 128 million components annually.

**All quality testing for Oil Pumps are carried out in BGA's Headquarters in Wiltshire, United Kingdom.**



### Surface finish of wear plate.

Surface finish is critical to the operation of the pump to prevent excessive wear between stationary components such as the wear plate and the rotor itself.



### Surface finish of rotor.

All critical surfaces are measured for both hardness and surface finish compared with the OE specification.



### Surface finish of relief valve.

All critical dimensions are measured using our CMM and compared with the OEM sample.

# BGA's OIL PUMP RANGE.

Containing over 180 References Fitting in excess of 9,000 vehicle models covering all makes.

- Quality guaranteed due to extensive in-house testing and validation.
- Extensive range in stock ready to order.
- Technical support available via Tech support enquiries and technical bulletin.
- Contains everything the installer needs for a complete installation.

## Intermediary Shaft Driven

Most commonly used in VW/Audi/Seat/Skoda, the Balance shaft module driven by the crankshaft provides drive to the oil pump via an additional shaft.



## CRANKSHAFT DRIVEN:

Situated directly on the end of the engine and driven by the crankshaft, this design usually incorporates a cover which sits directly above the sump and is sometimes found in the front/ timing cover.

## CHAIN DRIVEN:

With more modern vehicles being equipped with Timing Chains, the Oil Pump has followed this trend with the drive of a chain system.



## SHAFT DRIVEN:

Incorporating a drive shaft, this type of pump is usually driven from a crankshaft or Intermediary Shaft. A spline or slot fitment is usually found on the end of the shaft.



## GEAR DRIVEN PUMP

Gear driven pumps include an inter meshing gear which are predominantly used on heavy duty diesel applications.



## BELT DRIVEN

Equipped with a pulley instead of a sprocket, this design is driven by a rubber belt, much like a water or vacuum pump.



# RE-ENGINEERING

Example: Oil Pump Movement Issue, LP0802K.

Opel/Vauxhall Y17DT, Y17DTL, Z17DTH, Z17DTL, Z17DTJ Engines.

**BGA have modified and improved the LP0802K to overcome movement issues.**

The Rotor and Drive Pulley contact areas have been increased by 72% which reduces the movement tolerance to  $0.5 > 1^\circ$ . The Pulley has been secured and correctly torqued negating the need for removal during installation.

## INITIAL SYMPTOMS

- Damage to the Drive Pulley
- Movement between the Pulley and Shaft after tightening the nut to the manufacturers specified torque.
- Metallic noise from the timing cover lower sections.
- Low oil pressure.
- Non-operation or damage.

## REPLACEMENT REASON

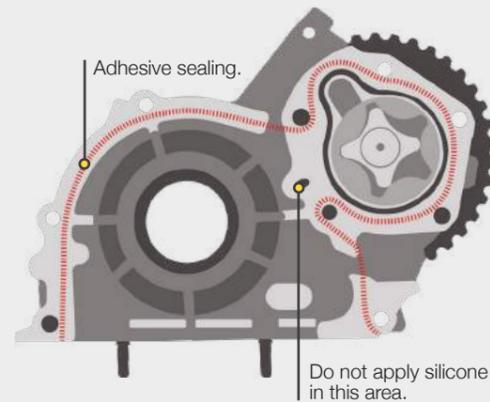
Movement between the Shaft and Pulley's contact faces due to insufficient tightening of the securing nut can affect the Oil Pump longevity. The nut will become loose and not re-tighten resulting in timing or lubrication failure. The OE equivalent has  $3 > 5^\circ$  of movement.

## PREVENTATIVE MEASURES

- During Timing Belt replacement, thoroughly examine the Oil Pump's rotor shaft, rotor drive contact face and behind the drive pulley for wear. If evident, replace all.
- Never replace an Oil Pump without a new Pulley and locking nut.
- Do not tighten beyond 25nm or 18.5 ft-lbf.
- Removing the pulley is not required during installation of the BGA Pump because it could damage the rotor seal.
- Apply adhesive sealing compound as shown by the dotted area.



A design flaw in the OE Pump led to insufficient contact area between the drive shaft and the rotor, allowing  $3-5^\circ$  of movement between the shaft and the rotor. BGA reengineered the shaft to increase this surface area by 72%.



The bolt holes are accessible; Pulley removal is not necessary.

# RECOMMENDED REFERENCES:

Identified by BGA's product management team.





**#BESTUNDERPRESSURE**

 **ENGINEERED  
IN GREAT BRITAIN**



**WEBSITE:**  
[WWW.BGAUTOMOTIVE.CO.UK](http://WWW.BGAUTOMOTIVE.CO.UK)

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[STORE.BGAUTOMOTIVE.CO.UK](http://STORE.BGAUTOMOTIVE.CO.UK)